

REMARKS

In the Office Action the Examiner restricted examination to of the claims to one of three species. Examination had previously been restricted to claims 1-17. Claim 11 has been cancelled. Claims 1-10 and 12-17 remain as elected claims.

The first species was for claims that included "implanting the semiconductor substrate through the first insulating layer with a first species to form a first doped region ..." The other two species had differing content but largely distinguished from the first species by not including the implanting. Thus, independent claims 10 and 17 did not meet the requirement of the Examiner's first species. Claims 10 and 17 have now been amended to include this requirement so that all of the claims 1-10 and 12-17 qualify under the meaning of the Examiner's first species. Accordingly, all claims 1-10 and 12-17 are elected.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicant believes the application is in condition for allowance which action is respectfully solicited. Please contact the below-signed if there are any issues regarding this communication or otherwise concerning the current application.

Respectfully submitted,

SEND CORRESPONDENCE TO:

Motorola, Inc.
Law Department

Customer Number: 23125 SEP 17 2002

FAX COPY RECEIVED

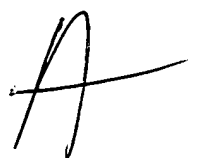
TECHNOLOGY CENTER 2800

By: James L. Clingan, Jr.
James L. Clingan, Jr.
Attorney of Record
Reg. No.: 30,163
Telephone: (512) 996-6839
Fax No.: (512) 996-6854
Email: Jim.Clingan@Motorola.com

PARAGRAPHS - VERSION WITH MARKINGS TO SHOW CHANGES MADE

At page 6, line 17:

Shown in FIG. 9 is SOI device 60 comprising a substrate 62 having a contact region 63 formed therein. SOI device [10] 60 further comprises an insulator layer 64, an active layer 66, and an isolation region 68. Isolation region 68 is adjacent to active layer 66 and both overlie insulator layer 64. Contact region 63 is formed by a blanket implant of preferably boron at 100 KeV. The boron is preferred over indium because it is lighter. Indium may be effective as well, but boron will more easily penetrate through active layer 66 and isolation region 68 as well as insulator layer 64. Thus, the result of the implant of boron is a heavily doped contact region which is under insulator layer 64 throughout a particular semiconductor wafer. SOI device 60 shows only a portion of a complete die and wafer. The structure shown in FIG. 9 is conventional except for the implant and the consequent effect of the implant. The formation of an isolation region 68 adjacent to an active layer 66 overlying an insulator 64 which in turn overlies a substrate of silicon is conventional. The implant at this point provides for the beneficial contact region 63 which is not conventional.



CLAIMS - VERSION WITH MARKINGS TO SHOW CHANGES MADE

10. (Amended) A method of forming a contact comprising:

providing a semiconductor stack including an active layer formed on a first insulator layer, wherein the first insulator layer is formed on a semiconductor substrate;
forming a gate dielectric over the active layer;
forming a gate electrode over the gate dielectric;
forming source and drain regions in the active layer and adjacent the gate electrode as to form a channel region underneath the gate electrode;
removing a portion of the active layer;
forming a second insulator layer adjacent the active layer and on the first insulator layer;
forming a doped region within the substrate [before forming the gate electrode] by implanting through the first insulator layer;
forming a first opening in the second insulator layer and the first insulator layer; and
forming a conductive material within the first opening.

12. (Amended) The method of claim [11] 10, wherein forming a doped region within the substrate further comprises implanting the first species through the second insulator layer and the active layer.

17. (Amended) A method of forming a contact comprising:

providing a semiconductor stack including an active layer formed on a first insulator layer, wherein the first insulator layer is formed on a semiconductor substrate;
removing a portion of the active layer;
forming a second insulator layer adjacent the active layer and on the first insulator layer;
forming an opening in the second insulator layer and the first insulator layer;
forming a conductive material within the opening; and
forming a doped region within the substrate under the area of the opening [before forming a conductive material within the opening] by implanting through the first insulator layer.